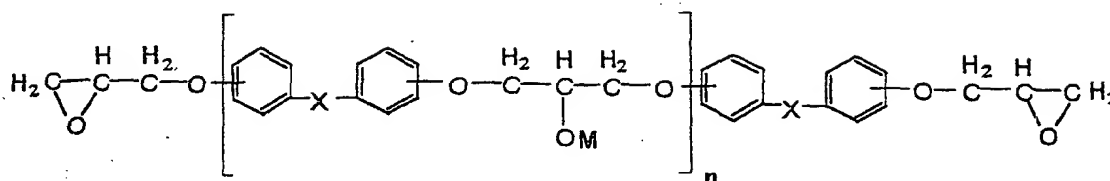


Claims

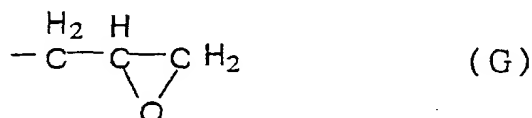
- Sub A2
- (1) An urethane oligomer(A) obtained by reacting a polyol compound(a) with a polybasic acid anhydride(b-1) having at least two acid anhydride groups per molecule, a polyisocyanate compound(c), and a hydroxy compound having ethylenically unsaturated groups and the salt thereof.
 - (2) An urethane oligomer(A) according to Claim (1), wherein said polybasic acid anhydride(b) having at least two acid anhydride groups per molecule has an acid value of 200-1500mgKOH/g and the salt thereof.
 - (3) An urethane oligomer(A) according to Claim (1) or (2), wherein said urethane oligomer(A) has a weight-average molecular weight of 1,000-100,000; and the salt thereof.
 - (4) An urethane oligomer(A) according to any of Claim (1) to (3), wherein said urethane oligomer(A) has an acid value of 1-200mgKOH/g and the salt thereof.
 - (5) A resin composition comprising an urethane oligomer(A) according to any of Claim (1) to (4) and an unsaturated group-containing polycarboxylic acid resin(B) that is a product obtained by reacting an epoxy resin (e) having at least two epoxy groups per molecule with a monocarboxylic acid compound(f) having ethylenically unsaturated groups and a polybasic acid anhydride(b-2).
 - (6) A resin composition according to Claim (5), wherein said epoxy resin (e) having at least two epoxy groups per molecule

is represented by Formula (1):



(1)

(In the formula, X is $-\text{CH}_2-$ or $-\text{C}(\text{CH}_3)_2-$, n is an integer of 1 or more, and M is hydrogen or a group represented by Formula (G) as shown below:



, provided that M is a group represented by Formula (G) if n is 1, while at least one M is a group represented by Formula (G) and each the remainders being hydrogen if n is an integer more than 1).

Sub A3 (7) A resin composition comprising an urethane oligomer(A) according to any of Claim (1) to (4) and a thermoplastic polymer(D).

(8) A resin composition according to Claim (5) or (6), comprising a diluent(C).

(9) A resin composition according to Claim (7) or (8), wherein said diluent(C) is a reactive diluent(C-1).

Sub A3
(10) A resin composition according to any of Claim (5) to (9) comprising a photopolymerization initiator(E).

(11) A resin composition comprising an urethane oligomer(A) according to any of Claim (1) to (4), a thermoplastic polymer(D) and a photopolymerization initiator(E).

(12) A resin composition according to Claim (11), wherein said thermoplastic polymer (D) is a polymer having carboxyl groups.

Sub A4
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(13) A resin composition according to any of Claim (1) to (10) comprising a thermosetting component(F).

(14) A resin composition according to any of Claim (5) to (13), wherein said resin composition is prepared for the solder resist in a printed circuit board or for an interlayer dielectric layer.

(15) A photosensitive film comprising being prepared by laminating the layer of a resin composition according to any of Claim (10) to (14) on a supporting film.

(16) A photosensitive film according to Claim (15), wherein said photosensitive film is prepared for a printed circuit board.

Sub A5
(17) A cured product of the resin composition according to any of Claim (5) to (16).

(18) An article comprising having the layer of a cured product according to Claim (17).

(19) An article according to Claim (18), wherein said article is a printed circuit board.

(20) A two-liquid type of resin composition set comprising a

principal resin composition which contains (1)an urethane oligomer(A)or the salt thereof, (2)either an unsaturated group-containing polycarboxylic acid resin(B) or a thermoplastic polymer(D), and (3) a photopolymerization initiator(E)and a curing agent composition which contains a thermosetting component(F).

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